services. These programs include not only those sponsored or initiated by the TIA and its Members but also those recommended by Government agencies.

Section B. STATEMENT OF POLICY

The following statement of policy, reflecting the basic objectives of all Standardization programs, shall be included in all TIA Standards:

> "TIA Standards are designed to serve the public interest by eliminating misunderstandings between manufacturers and purchasers, facilitating interoperability, interchangeability and improvement of products, and assisting the purchaser in selecting and obtaining the proper telecommunications product for his or her particular need. Existence of such Standards shall not in any respect preclude any Member or non-Member of the TIA from manufacturing or selling products not conforming to such Standards."
>
> "Except as provided in the Engineering Manual, Standards are proposed or adopted by the TIA without regard to whether their proposal or adoption may in any way involve patents on articles, materials, or processes. By such action, the TIA does not assume any liability to any patent owner, nor does it assume any obligation whatever to parties adopting TIA Standards, to parties manufacturing or selling products or services conforming to such Standards or to users of such products or services. Other TIA rules respecting Standards where patents are involved are contained in the Manual and should be read in conjunction with these Guides. Furthermore, in all cases specific requirements and restraints expressed elsewhere in these Guides must govern."

Section C. BASIC RULES FOR CONDUCTING PROGRAMS

All TIA Standardization programs shall be conducted in accordance with the following basic rules:

(1) They shall be carried on in good faith under policies and procedures which will assure fairness and unrestricted participation;

(2) Participation shall be extended to all technically qualified Members of the industry, including representatives of user groups where appropriate, irrespective of Membership in the TIA;

(3) Each program shall be shown to serve one or more of the public interest objectives as provided in Section D of this PART II;

(4) They shall not involve any agreement, expressed or implied, to adhere, or require adherence to a Standard or the use of any coercion, directly or indirectly, with respect thereto;

(5) They shall not be proposed for or indirectly result in

(a) effectuation of a price fixing arrangement, facilitating price uniformity or stabilization, or restricting competition, giving a competitive advantage to any manufacturer, excluding competitors from the market, limiting or otherwise curtailing production, or

(b) reducing product variations except where required to meet one or more of the objectives set forth in Section D of this PART II; and

(6) Personnel participating in such programs as the representatives of Members of the industry should be technical personnel.

Section D. SELECTING A PROGRAM

All Standardization programs must be shown to serve a legitimate public interest objective and that objective should be specifically stated in the context of the Standard. To assure this, the program should relate to the achievement of one or more of the following objectives:

(1) promoting interchangeability and interoperability of products falling within the scope of TIA Engineering Committees;

(2) eliminating misunderstandings or confusion between manufacturers and buyers with respect to products on which TIA Standards or Specifications are adopted;

(3) providing assistance to the purchaser in selecting and obtaining the proper product for a particular need;

(4) improving the quality of products covered by TIA Standards or Specifications.

Section E. NOTICE OF MEETINGS

Advance notice shall be given to all participating representatives as to the matter to be considered for Standardization and the nature of the action being contemplated. Procedures should provide reasonable means for making available all data, Specifications, and other technical information relating to a product, process or technology proposed for Standardization to all persons participating in or contributing to the program involved irrespective of their Membership in the TIA. Committee activities should be limited to discussions of the engineering and technical aspects of Standardization or the procedures relating thereto.

Section F. SPECIAL RULES FOR CONDUCTING STANDARDIZATION PROGRAMS

(1) **Voluntary Adherence to Standards**. Adherence to Standards shall be entirely voluntary and within the discretion of individual manufacturers. Any agreement, expressed or implied, or any coercion, direct or indirect, to adhere or to require or compel adherence to a Standard is **not permitted**.

(2) **Engineering and Technical Considerations**. All Standardization activity shall be confined to the technical and engineering considerations in the establishment of a Standard and these considerations shall relate to one of the legitimate objectives as provided in Section D of this PART II.

(3) **Commercial Standards**. Standardization relating to the commercial aspects of products, such as conditions or terms defining commercial relationships between manufacturer and buyer with respect to engineering Standards is **not permitted**. This type of activity is the proper concern of each interested company acting individually and is not a proper Association activity. (See Section A(3), PART I of these Guides.)

(4) **Standards Involving Quality or Performance**. Generally, Standards relating to quality or performance of products should not specify or describe the characteristics of such products in terms of maximum quality or maximum performance. This does not preclude Standards stated in terms of maximum or minimum - maximum characteristics which are prescribed for the sole purpose of indicating that the product meets certain limited requirements and is designed to serve limited technical functions and purposes. Such Standards generally involve product differentiation as distinguished from product quality. Standards may include suggested specific AQL's (Acceptable Quality Level) for guidance purposes with the actual AQL to be agreed upon between the manufacturer and the user, or include ranges of AQL's for the same purpose.

(5) **Revision of Standards**. Any revision of an existing Standard shall conform to the same procedures and policies applicable to the initiation of the original Standard. Such

revision should be clearly justified as to legitimacy of objective and that objective should be stated in the revision.

(6) **Interpretation of Standards**. The interpretation of Standards, insofar as it may relate to a specific product or manufacturer, is a proper matter for individual company concern and should not be undertaken by TIA Staff Members or any person acting in the capacity of a TIA Engineering Committee Member. TIA Staff comments, if any, shall be limited to an explanation or clarification of technical language or provisions in a Standard but not related to its application to specific products or manufacturers. Means are provided in the Engineering Manual for the rendering of formal interpretations of TIA Standards, which interpretations will be available to all interested parties.

(7) **Acceptability of Standards**. All proposed Standards recommended by TIA Engineering Committees or task groups shall be submitted for final review and approval in accordance with the TIA Standards and Technology Department's Engineering Manual.

(8) **Final Adoption**. Final adoption of proposed Standards shall be in accordance with the Standards and Technology Department's Engineering Manual. In the process of adopting a Standard, consideration shall be given to all comments of industry and user interests where applicable irrespective of TIA Membership, and industry consensus must be demonstrated. If there is no consensus on the adoption of a proposed Standard, or if due process has not been afforded all commentators, the program involving such Standard should be abandoned or referred to an appropriate Formulating Group for further consideration.

Section G. PROCEDURES FOR COMMENTING ON MILITARY SPECIFICATIONS AND PRODUCTS

In offering comments or recommendations to elements of the Department of Defense on Military Standardization documents, the following procedures shall be followed:

(1) Participation shall be unrestricted and extended to all companies which have made known their interest regardless of Membership in the TIA or on the cognizant Committee or Committees;

(2) Adequate notice of meetings shall be given all Committee Members and all other companies or representatives known to have an interest and shall include all issues to be discussed;

(3) Comments and recommendations shall be offered merely as such, limited to the technical aspects of the Specifications, and shall reflect any divergence of views among those participating;

(4) Copies of comments and recommendations shall be sent to all company representatives known to have an interest;

(5) All submissions to the military departments shall contain a statement that the comments and recommendations reflect only the views of the group participating; and

(6) They shall be reviewed and submitted by TIA Staff in accordance with established procedures.

(7) All applicable laws and regulations shall be strictly adhered to.

Annex C - Project Request Form & ANSI PINS Form
(following page)

11

Standards and Technology Department

Project Request and Authorization

Date (mm/dd/yy)	Formulating Group	Project Number
___/___/___	_____	_____

Type of Project:
(ANSI PINS Form Required)

- [ ] Existing Standard _____ [ ] Reaffirm
- [ ] New Standard [ ] Revise
- [ ] New Specification [ ] Rescind
- [ ] New Interim Standard

(Non-ANSI)

- [ ] Formal interpretation of _____
- [ ] Bulletin
- [ ] Other Publications
- [ ] Input to Other Standards Bodies
- [ ] Other Project (describe)

Project Title (Working title, if standard or publication)

Scope and Justification for Project

Identify other interested or affected standards bodies; describe proposed means of coordination:

Estimated completion by formulating group: ___/___/___

Estimated date forwarded to TSSC: ___/___/___

Formulating group contact:

_____
Name

_____
Company

_____
Street Address

_____ _____ _____
City State Zip Code

_____ _____
Telephone Fax

Approved _____ Date ___/___/___

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13

ANSI American National Standards Institute

ANSI Standards Activities Tracking System
Project Initiation Notification System (PINS) Form

One form is required for each project, see reverse side for instructions
Complete and Return to ANSI PSA Center Date: _____

Name of Accredited Standards Developer:

Date of Accreditation: _____
Operating Procedures (circle one) **Have** **Have not** been revised since that date
These revisions (circle one) **Have** **Have not** been submitted to ANSI for review

Designation of Project (35 characters maximum, with spaces)*:

Title of Project (300 characters maximum, with spaces)*:

Scope Summary or Abstract of Project (1200 character maximum, with spaces)*:

Additional Keywords (not contained in title or scope summary/abstract, seven words maximum):

Intent: ___Develop a new American National Standard ___Discontinue a project previously initiated
__Revise an existing American National Standard ___Reaffirm an existing American National Standard
___Withdraw an existing American National Standard ___Adoption of an International Standard
Expected initiation: _____ and completion: _____ of this project
Contact (Staff person responsible for this technical area):

Name _____ Title_____

Affiliation _____

Address_____

City_____State_____Zip_____

Telephone (_____) _____ - _____ ext _____

Submitted by _____ Print or Type name _____

For ANSI's use only: PA _____ SB _____

*Attach separate sheet if necessary

Instructions for Filling Out the
ANSI Project Initiation Notification System (PINS) Input Form PINS-1

General: This form is to be used to notify ANSI of the initiation of a standards project. Information submitted on the PINS-1 form will be added to ANSI's central data bank which contains information relative to voluntary national standards and is a key resource in planning and coordination. This form is not to be used to submit a standard to ANSI for approval, which is achieved by using ANSI forms BSR-8 or BSR-9.

Definition of Project: A standardization activity formally approved by a standards developer and is directed towards the development, revision, reaffirmation or withdrawal of an American National Standard.

- -

Items on the PINS-1 form are listed below together with instructions and explanation.

Date The date to be entered will reflect the date the form was completed for transmittal to ANSI. It will establish the timeliness of the data entered into the data bank.

Name of Accredited Standards Developer: The full name and acronym of the standards developer having responsibility for the project should be entered here.

Date of Accreditation and Status of Operating Procedures: The Executive Standards Council (ExSC) wishes to remind ANSI-accredited standards developers of their obligation, under the ANSI Procedures, to submit any revisions to their operating (standards development) procedures to ANSI for review and ExSC approval, if appropriate. Please enter the submitting organization's date of accreditation and circle the appropriate entry concerning its procedures.

Designation of Project: This is the unique alphanumeric code used by the standards developer to refer to the project. It is the reference usually used when inquiries are received. The designation must be limited to 35 characters (including spaces).

Title of Project: This is the full title of the project or standard which is the subject of the form. The title must be limited to 300 characters (including spaces).

Scope Summary or Abstract of Project: for the purpose of coordination of standards activity, this section of the form is the most critical. The information should clearly indicate what is covered by the project in order to differentiate it from similar projects on file at ANSI. There is a limit of 1200 characters (including spaces).

Additional Keywords: The data bank will be searched using selected words contained in the title or scope summary/abstract. Additional keywords not contained in the title and scope summary/abstract may be indicated by the standards developer to expand search capability.

Intent: Tick the appropriate line preceding whether the activity covers development of a new American National Standard or is dealing with the revision, reaffirmation, withdrawal of an existing American National Standard or the discontinuation of a project previously initiated. If an International Standard is to be adopted without any change as an American National Standard, please indicate on the appropriate line.

Expected Initiation and Completion of Project: Please enter the approximate dates of the initiation and completion of this project within your organization.

Contact Person: This is the person who will be contacted should there be a need for additional information or consideration with regard to the project. Only the staff person responsible for the technical area should be indicated. When inquiries are made of that person he/she may direct the inquiry to the appropriate expert.

Annex D - Meeting Notice & Agenda

Organization: TIA TR-15
High Frequency Communications
Systems and Equipment

Chair: Willard P. Smith
(202) 457-4912

Date: 14 June, 1991

Time: 9:00 am

Place: Toledo Towers Hotel
Toledo, OH
(900) 238-1056

Agenda:

1. Call to Order
2. Meeting Report (Meeting 53)
3. Subcommittee Reports
4. Consideration of PN-4035 (High-speed interface) for circulation as a Standards Proposal.
5. Set future meeting schedule
6. Other Business
7. Adjournment

Annex E - Meeting Report

TELECOMMUNICATIONS INDUSTRIES ASSOCIATION
Standards and Technology Department
Meeting Report, Meeting Number 54
Committee TR-15 High Frequency Communications Systems and Equipment
14 June 1991 Toledo Towers Hotel Toledo, OH

MEMBERS PRESENT

NAME	ORGANIZATION REPRESENTED
Willard P. Smith (Chair)	Afgo Communications
Moe Diehl	Acme
Joe Morgan	Uvicom
Douglass de Jesus	Ephemerex
Tom Nissan	Holorex
Fred Once	De Coriolis Data Systems

MEMBERS ABSENT

David LeBest	Demovox
Enid Howard	Southern ComTel
Arnold Lafitte	Duro Inc

OTHERS

(None)

1 Call to Order

The meeting was called to order at 4:45 pm. on Friday, June 14, 1991, by Chair Willard P. Smith. The meeting was held at the Toledo Towers Hotel, Toledo, OH. The Chair announced that a quorum was present.

2. Meeting Report

The Meeting Report of Meeting Number 53 was accepted with editorial corrections.

3. Subcommittee Reports

The Chair of Subcommittee TR-15.1, Ephemeral Interfaces, reported that the Subcommittee had completed work on project PN-4035. Ephemeral Communications, High-speed Interface, and had voted unanimously to request that it be issued for public comment as a Standards Proposal. Since the final draft of PN-4035 had been mailed to all TR-15 members in advance of the meeting, and the Proposal had been included in the published agenda, the Chair called for discussion prior to a vote to issue a Committee Letter Ballot to approve PN-4035 as an SP. Mr. Once asked the Subcommittee Chair to explain the need for dual backsignals on the F3 and Q5 leads, when it seemed that either one would do. The Chair explained the Subcommittee's rationale, which concerned time delays on satellite circuits. Mr. Once withdrew his objection. The Committee then voted 6-0 for release of the letter ballot.

There were no action items from the other sub-committees. Two draft documents from TR-15.2 were distributed for information.

4. Future Meetings

The next meeting will take place September 4-7 at the Sunnydell Hilton, Sunnydell, GA and will be hosted by Demovox and Uvicom.

The schedule for the next meeting is as follows:

9/04	9/05	9/06	9/07	
Tues	Weds	Thurs	Friday	
TR-15.4	TR-15.3	TR-15.1		TR-15.2
TR-15.2.1	TR-15.2.1	TR-15		

5. Other Business

There was no other business.

6. Adjournment

The meeting was adjourned at 5:00 pm. This meeting was conducted in accordance with the TIA Legal Guide and TIA Engineering Manual.

/Signature/

Willard P. Smith, Chair TR-15 High Frequency Communications Systems and Equipment

/Signature/

Tom Nissan, Secretary

Document Register

Committee: TR-15 Year: 1991

Doc No.	Title	Source
TR-15/91/06/001	PN-4035 High-Speed Interface	TR-15.1
TR-15/91/06/002	IS for Automode Procedures	TR-15.2
TR-15/91/06/003	Modem (GSTN) Beyond 14400 bit/s	TR-15.2

Note: This is a minimum set of information for the document register. Other information, such as meeting report references may be added.

COMMITTEE CORRESPONDENCE

2500 Wilson Boulevard • Suite 300 • Arlington, VA 22201
703/907-7700 • FAX: 703/907-7727

Representing the telecommunications industry in association with the Electronic Industries Association

Annex F - Committee Correspondence Letterhead (previous page)

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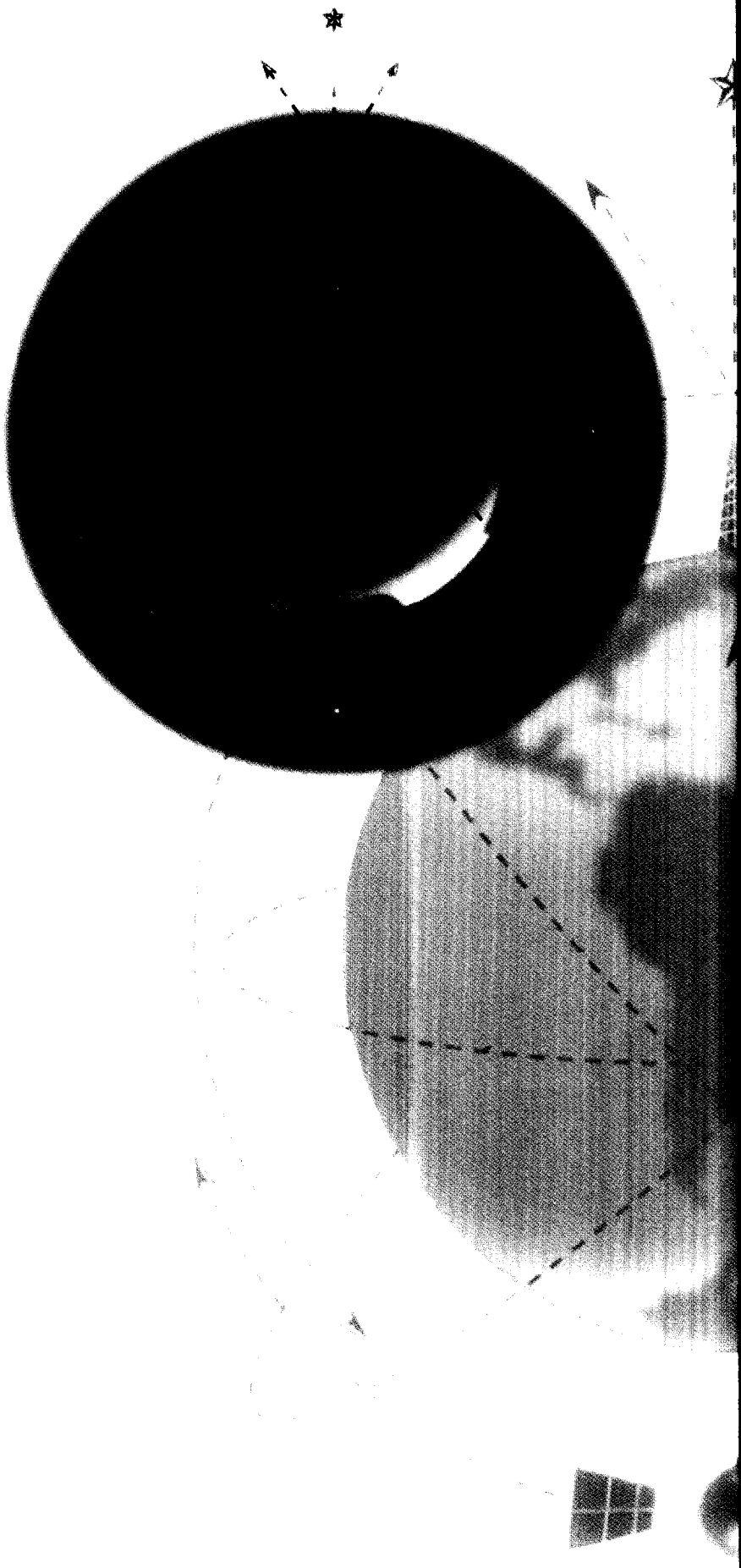


STR

Attachment B

STANDARDS AND

TECHNOLOGY

ANNUAL REPORT

1995

TELECOMMUNICATIONS

INDUSTRY ASSOCIATION

"Standards have a huge financial payback in the world."

Chris Hjelm, VP International Systems Development, Federal Express, in his keynote address at ISO/IEC/ITU Seminar on the Standards Aspects of the Global Information Infrastructure (GII) in Geneva, Switzerland, January 24, 1996 discussing user perspectives and the economic value of standards to Federal Express's worldwide operations.

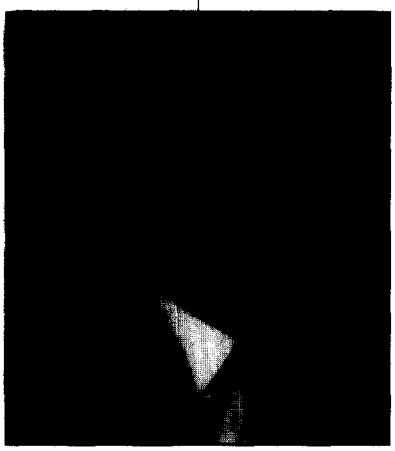
"In a global marketplace, there are no longer convenient 'national' or 'regional' ways of doings things, but only a single global way."

Leonardo Chiariglione, CSELT, and recent President and Chairman of the Board of DAVIC, at the ISO/IEC/ITU GII Seminar, January 25, 1996

STAR

Successful Standards Partners

This past year has been an exciting and eventful one for both Global and TIA. As you can imagine, it has also been a year of change—with the introduction of new products, new processes, new software and new services. In fact, it is no exaggeration to say that the partnership between Global and TIA is virtually a new one, compared to just a few years ago.



Tom Littman
Vice President Operations
Global Engineering Documents

Over the years, the successful relationship between Global and TIA has kept in step with the ever-quickening pace of the telecommunications industry. Customers who must meet critical deadlines or need information at a moment's notice can count on Global's immediate response. In fact, over 85% of all orders are shipped the same day.

Global maintains the world's largest library of hardcopy technical standards, government and military specifications, safety/compliance information and much more. A team of highly skilled information specialists assists customers identify the specific documents they need from over one million documents in stock.

Global, together with its parent company, Information Handling Services, has grown in size and now includes international offices in Hong Kong, Paris, Miami (Latin America), UK, Canada, Cairo, Tel Aviv, Munich, Sydney and Mexico City. This means more powerful service and exposure for TIA standards. And it's just one more step Global and TIA have taken to promote industry and international standards—worldwide!

Global and TIA—A Partnership that brings you the information you need—when you need it

Global Engineering Documents
An IHS Group Company

15 Iverness Way East
Englewood, CO 80112
1-800-854-7179

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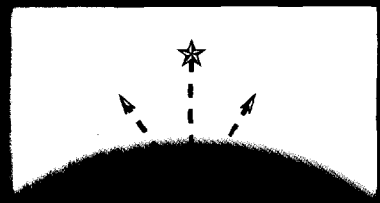
1995 Standards and Technology Annual Report

STAR



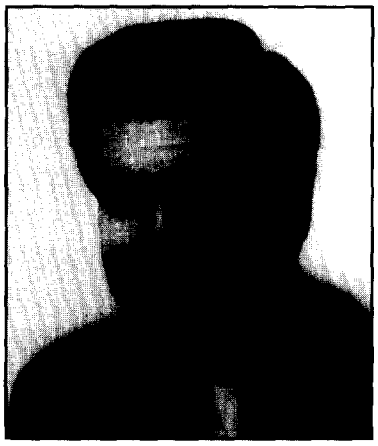
TELECOMMUNICATIONS TIA

Representing the telecommunications industry in association with the

THE PRESIDENT'S DESK

Standards Impact the Success of TIA Member Companies

The inaugural issue of the TIA Standards and Technology Annual Report (STAR) was released at our Fall Conference in November 1994 as we celebrated 50 years of active standards writing. This 1995 issue of STAR provides a brief glimpse of that event and the technical personnel who were honored. Standards continue to be an integral part of TIA's service to its members and in 1995 our standard-setting activities grew at an exponential rate. The 1995 STAR highlights those accomplishments in this area.



Matthew J. Flanigan
President

The need for standards can be traced to the early origins of TIA. Standards were one of the primary reasons for the creation of the Radio Manufacturers Association (RMA) in 1924. RMA eventually became the Electronic Industries Association (EIA). The Information and Telecommunications Technologies Group of EIA (EIA/ITG) formed the Standards and Technology Department of TIA in 1988, when EIA/ITG merged with the United States Telecommunications Suppliers Association to form TIA.

Today, TIA continues to place great importance on standards, evident in the many accomplishments of our engineering committees. 1995 was dynamic with activities supporting both the National and Global Information Infrastructure (NII/GII) initiatives. TIA hosted activities related to NII and GII in Europe, and jointly issued a White Paper with EIA on the GII in response to Vice President Al Gore's *GII: Agenda for Cooperation*, released in February 1995. TIA is also an active participant and holds a seat on the steering committee of the Information Infrastructure Standards Panel (IISP) sponsored by the American National Standards Institute, which is identifying standards for NII/GII. In addition to the global focus on standards, there is an increasing regional focus. In December 1994 at the Summit of the Americas, President Clinton discussed the Free Trade Agreement of the Americas and the critical role the Inter-American Commission on Telecommunication (CITEL) would play in the area of standards throughout this hemisphere. TIA became an Associate Member of CITEL in 1995.

The focus of the STAR is to highlight the work of the technical personnel supporting TIA's standards development. Standards have a significant impact on the success of TIA's members and play a key role in the overall success of our industry. The Federal Communications Commission's (FCC) Network Reliability Council reviewed the nation's standards-setting process and noted the enhancements TIA has made over the last several years. The FCC also validated the key role standards play in ensuring a reliable, interoperable network. Internationally, our standards activities are expanding as more of our members participate in the global marketplace. TIA will continue its commitment to support the resources needed to maintain its program. TIA also urges members to continue supporting the work of standards by making the resources — both human and other — available to carry on this vital function.

Sincerely,

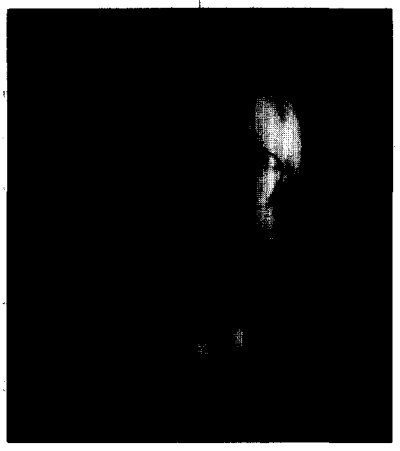
Matthew J. Flanigan, *President*

TECHNICAL COMMITTEE REPORT

Supporting the Voluntary Standards Process

The TIA Board of Directors created the Technical Committee to oversee the standards work and other technical matters of the Association. The Technical Committee is chaired by a member of the Board and has overall responsibility for establishing the broad technical policy of the Association, including the organization and operating policies of the Standards and Technology Department and the engineering committees.

My first term as the chair of the Technical Committee began in 1995. The technology program at TIA, accredited by the American National Standards Institute (ANSI), is extremely active; TIA issues on average one standard or technical document per week. Over 1,200 technical personnel support TIA's standards activities in its 70 committees and subcommittees. The five product-oriented divisions of TIA sponsor its engineering committees and subcommittees. These divisions include: the User Premises Equipment Division (UPED), which sponsors TR-29, TR-30, TR-32 and TR-41; the Mobile and Personal Communications Division (MPCD), which sponsors TR-8, TR-45, and TR-46; the Network Equipment Division (NED), which sponsors TR-14; the Fiber Optics Division (FOD), which sponsors FO-2 and FO-6; and the newly created Satellite Communications Division (SCD) which sponsors TR-34.



Bob Coackley
Chair, Technical Committee

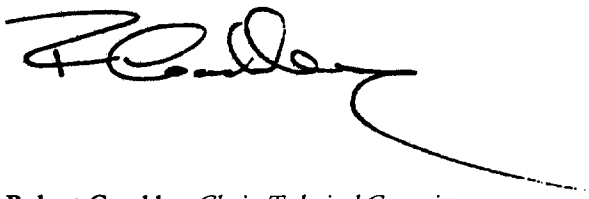
As sponsors, the divisions provide funds for the staff support, printing, postage, travel, meeting rooms, refreshments, audio-visual equipment and other resources necessary for the engineering committees and subcommittees. Often, particular meetings are hosted by companies or other organizations active in our standards work, and this assistance is greatly appreciated. Along with the human resources of the attendees at TIA's standards meetings, there is a considerable amount of other resources dedicated to the standards effort. Considering the addition of the SCD and increased international standards efforts, the TIA Board in 1995 authorized major increases in TIA staff support for our Standards and Technology Department.

A major portion of the funds for standards work comes from the dues of TIA members. In addition, TIA sells the published standards to help supplement standards-setting activities. TIA also gains support from non-TIA member engineering fees and other fees from those participants in our committees who are not TIA members, but who participate in our standards work.

TIA standards are published worldwide by Global Engineering Documents and IHS and are available in hard copy, CD-ROM, microfiche, and microfilm. TIA also sponsors educational seminars directed to explaining our standards and the process used to create them. We cooperate with other standards developing organizations to avoid duplication of standards and make our standards available for use by other such organizations. We worked closely with Committee T1 and the Society of Cable Telecommunications Engineers (SCTE) in 1995 on joint efforts.

The program works and works well due to the concerted efforts of TIA staff and the many participants, companies, and other organizations that support the voluntary standards process.

Sincerely,

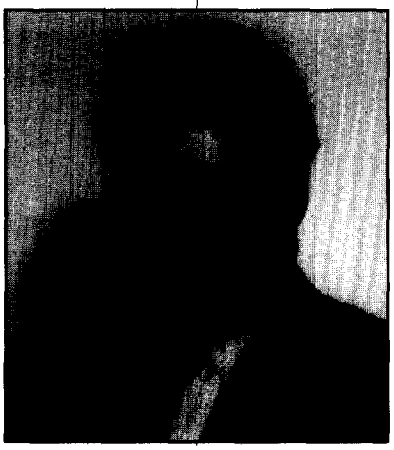


Robert Coackley, *Chair, Technical Committee*

A WORD FROM THE CHAIRMAN

A Record Breaking Year

It has been my pleasure to serve as the Chairman of the Board for 1995 at TIA. As a result of a new by-law provision, I have elected to remain for a second term and will serve as TIA Chairman for 1996. 1995 has been another record year for the industry. Again, telecommunications manufacturing has been leading the electronics industry both in U.S. sales and exports. Burgeoning international markets have signaled huge opportunities for our members. In fact, the telecom equipment market outside the U.S. is increasing by at least 20% a year, compared to a 5% growth rate in the U.S.



Leigh S. Belden
Chairman of the Board

TIA has responded with increased support to help serve members as their needs and concerns change in the global marketplace. We have expanded our activity with international standards-setting organizations. TIA represents the telecom industry on the North American Free Trade Agreement-recognized Consultative Committee-Telecommunications. We participated in a number of International Telecommunication Union (ITU) meetings, including Working Party 8A, a contingent of the ITU Radiocommunications Sector. TIA staff were also invited guests at a number of European Telecommunications Standards Institute (ETSI) meetings.

In June 1995 TIA became an Associate Member of CITEL, the Inter-American Telecommunication Commission under the Organization of American States. The markets in this hemisphere are important to TIA members and we are prepared to participate in the standards activities that support this region.

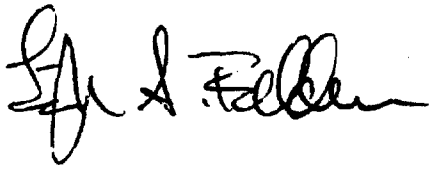
TIA standards activity in the U.S. also continued apace in 1995. We began intense standards work on implementing the Communications Assistance for Law Enforcement Act (CALEA). In regulatory affairs, we participated in numerous dockets and saw our efforts rewarded as the FCC provided additional channels for cordless telephones in response to a TIA Mobile and Personal Communications Division Section filing. We also filed a TIA petition seeking to harmonize Part 68 of the FCC rules with Canada's CS03 requirements for terminal equipment attachment.

Our standards programs continued to grow in 1995 and with the addition of the new TIA Satellite Communications Division we look forward to issuing the standards necessary for this segment of the industry. Our standards catalog, along with that of EIA, can be found on the World Wide Web at http://www.eia.org or visit the TIA web site.

The 1994 Standards and Technology Annual Report (STAR) was well-received by TIA members and the industry. It highlighted the technical work of the many participants in our American National Standards Institute (ANSI) - accredited programs. Having served as the chair of the TIA Technical Committee for many years, I am familiar with how TIA uses standards to help achieve greater market access. It is also important to note that the licensing of essential patents covered by our standards helps ensure a pro-competitive market. Our Engineering Manual contains our commitment to work with others, both nationally and internationally, to harmonize standards and avoid duplication of work.

In presenting you with the 1995 STAR, I am proud to continue the tradition begun in 1994 as we celebrated 50 years of active standards writing. My thanks go to the TIA staff and the engineering committee chairs and participants who continue to make TIA's standards program one of the most active in the world.

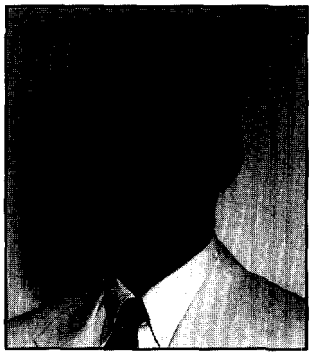
Sincerely,



Leigh S. Belden, ***Chairman of the Board***

TIA PRODUCT-ORIENTED DIVISION CHAIRS

TIA's Standards and Technology Department is composed of five product-oriented divisions which sponsor over 70 standards-setting formulating groups. The committees and subcommittees sponsored by the divisions - Fiber Optics, User Premises Equipment, Network Equipment, Mobile and Personal Communications and Satellite Communications - formulate standards to serve the industry and users well into the next century.



Ronald J. Angner
Chair, TIA User Premises Equipment Division
Director, Marketing Strategy and Planning
AT&T

Guy W. Numann
Chair, TIA Network Equipment Division
President, Communications Sector
HARRIS CORPORATION

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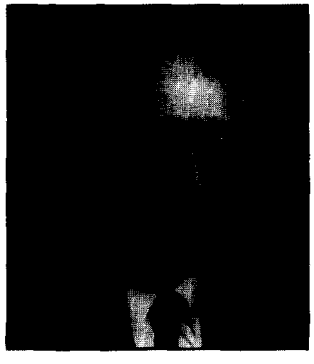
Chair, TIA Mobile and Personal Communications Division
Chief Wireless Architect and Managing Director
AT&T BELL LABORATORIES

Jan H. Suwinski
Chair, TIA Fiber Optics Division
Executive Vice President, Opto-Electronics Group
CORNING INCORPORATED



Thomas Brackey
Chair, TIA Satellite Communications Division
Director of Technical Operations
HUGHES SPACE AND COMMUNICATIONS COMPANY

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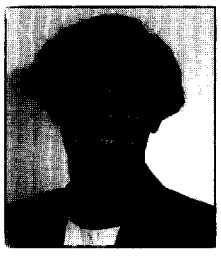

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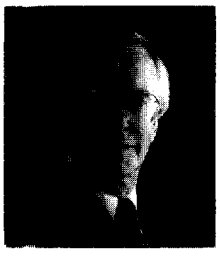

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